BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

CHRONIC PROSTATITIS

I. ETIOLOGY AND SYMPTOMS

NATHAN G. HALE, M.D (Medico-Dental Building, Sacramento).—The etiology of chronic prostatitis, in the major portion of the cases treated, is traceable to infection by the Neisserian organism, which, in most instances, has long disappeared from the secretion. The cause of chronic prostatitis, however, is not limited to the gonococcus, and greatest stress should be placed on this fact. Infected teeth, tonsils, and gastro-intestinal abnormalities are not uncommon causes of chronic prostatitis, and in the general examination for these possible foci of infection should not be overlooked.

Trauma in the perineum has resulted in a flare-up of a dormant prostatitis. Infections of the upper urinary tract will also produce this condition. However, in many cases it is difficult to determine whether the prostatitis is the cause of the upper urinary tract infection or, reversely, whether the prostatitis is caused by the infection in the kidney.

There are instances of instrumentation causing prostatitis, and one can say with certainty that prostatitis may become chronic by improper massage of the prostate, or by poor management of an acute infection.

The symptoms may be divided into two groups, the usual and the bizarre. Low back pain is perhaps one of the most common symptoms. Morning urethral drop, particularly following a history of gonorrheal infection, should make one suspicious, and investigation should be made several times before one can be thoroughly convinced that the microscopic picture clearly indicates the condition of the prostate.

Pain in the suprapubic and inguinal regions is not uncommon. Chronic prostatitis and chronic seminal vesiculitis are often associated, and it is difficult to differentiate between the two.

TABLE 1.—*Predominating Symptoms: Analysis of 50 Cases*

Low back pain	10
Morning urethral discharge	6
Burning on urination	6
Frequent urination	6
Perineal discomfort	4
Rheumatism	3
Diminished force of urination	3
Pain in the inguinal region	3
Pain and redness of eye diagnosed as iritis	2
Urgent urination	2
Decreased vision diagnosed as thrombosis vein of eye	1
Abdominal pain, gastric disturbance	1
Urethral discomfort	1
Slight terminal hematuria	1
Continuous urethral discharge	1

TABLE 2

Patients having no history of venereal disease	17
Patients having had a history of gonorrhea	33
5—"Many years ago"	
1—Thirty years previous to examination	
1—Twenty years previous to examination	
1—Fourteen years previous to examination	
1—Twelve years previous to examination	
1—Eleven years previous to examination	
3—Eight years previous to examination	
1—Seven years previous to examination	
1—Six years previous to examination	
1—Four years previous to examination	
5—Two years previous to examination	
4—Nine months previous to examination	
6—Eight months previous to examination	
2—Six months previous to examination	

The patient may or may not have obstructive urinary symptoms, as they are often contingent upon the involvement of the vesical neck with fibrosis and irritation produced in the posterior urethra.

It must be remembered that the prostate, when it is a foci of infection, is capable of producing symptoms far from the site of infection. Impotency and decrease in erection are not uncommon. However, one should not be so impressed with this fact as to conclude that the treatment of chronic prostatitis will improve all symptoms, without looking to other portions of the anatomy for possible causes of the same symptoms.

Fifty cases of chronic prostatitis collected alphabetically from case histories, either now under treatment or recently treated, are here segregated as to causes and symptoms presented at the time of examination.

In reviewing this small group, several points are presented that tend to prove that the symptoms of chronic prostatitis are bizarre, and that the usual textbook cause of prostatitis, 20 per cent nonvenereal and 80 per cent venereal, may not be correct. In this small group, seventeen cases, or 34 per cent, had no venereal history, and if one notes, fourteen other cases presented could be added to this list in which gonorrhea may have played only a remote part in producing prostatitis. This would bring the total to 64 per cent without a definite venereal background. However, the author believes 64 per cent is too high and 20 per cent is too low.

It is of interest to find that five cases of the fifty presented were harboring in the genital tract the original organism—one case four years after the onset of the infection. No doubt, if a more careful method could be used to search for and to isolate the organism, more cases would have shown the gonococcus.

Three cases of the fifty had eye symptoms. Iritis is more common than is suspected by most

TABLE 3.—*Gonococcus Identified in Cases of Chronic Prostatitis*

1—Four years following onset of infection
1—Two years following onset of infection
1—Nine months following onset of infection
1—Six months following onset of infection
1—Eight months following onset of infection

general practitioners. The case of the thrombosis of a vein of the eye associated with increase in blood pressure bears emphasis, as a careful search was made in this case for all possible foci of infection. Eighty per cent pus was found in the massaged secretion from the prostate, and the patient's condition steadily improved.

Median bars and other pathology of the vesical neck region were found in this group of fifty cases, and no doubt such conditions will be emphasized by other collaborators.

The case with the gastro-intestinal symptoms may not have had a definite relationship to the chronic prostatitis, as the physician's knowledge of the gastro-intestinal tract was not complete. There was, however, a marked prostatitis. Under treatment for this condition the symptoms improved, and the patient could not be convinced that gastro-intestinal series, etc., were necessary at this time.

Stress, then, should be laid on the fact that prostatitis is not always gonorrheal in origin. In a series of fifty unselected cases, 34 per cent were nongonorrheal. One should also stress that, in spite of seeming evidence that symptoms have been produced by the prostate, these symptoms may have been produced by other pathology, and emphasize that even cases diagnosed as chronic prostatitis should have a thorough physical examination.

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II. DIAGNOSIS

ROGER W. BARNES, M. D. (College of Medical Evangelists, Department of Urology, Los Angeles).—The presence of chronic prostatitis is frequently overlooked, and it sometimes produces symptoms attributed to other causes. In the examination of every adult male, care and thoroughness should be used to determine whether or not prostatic disease is present, and especially so when a focus of infection is being sought. Before making the digital examination of the prostate, the patient voids, preferably in two or three glasses, in order to cleanse the urethra of any secretion harbored there. Shreds or cloudiness in these glasses aids in determining the nature and extent of a urethral infection, but does not help in the diagnosis of prostatitis *per se*. After voiding, the patient stoops forward or kneels on a table so that the body is acutely flexed on the thighs, and either he or an assistant holds a glass under the penis to catch the prostatic secretion as it is expressed. The examiner uses the gloved index finger of either the right or the left hand (the same finger should be used each time so as to become accustomed to its use). With a light touch the finger is slowly moved over the entire surface of the gland and its size, mobility, limitations, and consistency are noted. When chronic infection is present, there are areas of induration which are somewhat harder than normal prostatic tissue, and these can be palpated as small or larger islets with normal prostatic tissue between. If the infection is extensive, the entire gland may be indurated and somewhat fixed, or if periprostatitis is present the hardness extends beyond the limits of the prostate. This type is occasionally mistaken for prostatic malignancy, but the latter is usually more stony-hard and more fixed. If the chronic inflammation in the prostate has been of long standing, fibrosis may dominate the picture. In this case rectal palpation reveals a gland which is somewhat smaller than average, quite "tough," but not stony-hard, and quite movable and well defined. A prostate which is quite symmetrically enlarged, tense and tender, feeling like a tightly stretched skin over an area of acute cellulitis, is acutely inflamed, and should not be massaged under any circumstances.

A form of chronic prostatitis without infection exists. As palpated through the anterior rectal wall, this type of gland is somewhat larger than average, well defined, soft, boggy, and sometimes "pits" on pressure. It is sometimes designated as chronic congestion of the prostate, or "toxic hyperplasia," and from it 0.5 cubic centimeter to 2.0 cubic centimeters of prostatic secretion can be expressed by proper massage. Even though this secretion shows no pus or other evidence of infection, it causes symptoms which are relieved by massage and proper sex hygiene.

In some cases a definite diagnosis of chronic prostatitis can be made by rectal palpation; nevertheless an examination of the prostatic secretion is essential either to confirm or to make a diagnosis. If the prostate is massaged properly, it is very seldom that this cannot be obtained. The ball of the finger is placed as high as can be reached on one side of the prostate, and with gentle pressure it is slowly moved downward and medially, following its lateral margin until the apex in the midline is reached. This stroke is repeated three or four times, each time starting a little nearer the midline. After one side is massaged in this manner, the same procedure is repeated on the other side, and lastly two or three gentle downward strokes in the midline are given. This will almost always express a few drops of secretion, which are placed on a slide, covered with a cover glass, and examined under first the low, then the high, dry power of the microscope. If more than one or two leukocytes are seen in a high, dry field, a diagnosis of chronic prostatitis can be made. A convenient method of designating the amount of pus present is to estimate the approximate per cent of the entire field covered with leukocytes and record it in this way—2 per cent, 20 per cent, 80 per cent, etc. Granular prostatic epithelial cells are sometimes difficult to distinguish from pus cells, especially mononuclear leukocytes, and a Gram stain of the dried smear is necessary to determine the amount of pus. Such a stained

smear will also reveal bacteria if many are present. If facilities are available for making bacterial cultures, these should be used in diagnosing infection in the prostate, for, by it more accuracy can be attained both in diagnosis and treatment. However, for the general practitioner to whom these facilities are not available, the microscopic examination of the freshly obtained prostatic secretion is sufficient. Occasionally a case may present findings by rectal palpation which are suggestive of chronic prostatitis, but no pus is found in the prostatic secretion. This may be because the infection is deep in the gland and the massage did not express the secretion from the infected alveoli. In such cases the massage is repeated every three or four days until pus is found, or until prostatic infection has been definitely eliminated.

Endoscopic examination of the prostatic urethra may aid in diagnosing chronic prostatitis, but is not essential to such a diagnosis. When this is done it is found that the mucous membrane of the prostatic urethra is fibrotic in character, being lighter in color than normal, and retracted. The prostatic duct orifices are dilated and rigid, and frequently pus can be seen to ooze from these. If fibrosis is extensive, the bladder neck is contracted and rigid, and often thickened as palpated between the cystoscope and the examining finger in the rectum.

For the general practitioner, however, digital examination of the prostate, and examination of the freshly expressed secretion under the high dry power of the microscope is sufficient to make a diagnosis of chronic prostatitis.

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III. TREATMENT

FRANCIS H. REDEWILL, M. D. (870 Market Street, San Francisco).—We have to believe with Paul Broca, who said, "I'd rather be a well-developed ape than a degenerated Adam," when we physicians continually come in contact with male patients, in all walks of life from laborers to undertakers, from clerks to dentists, from plumbers to philanthropists, who report to us that from five to thirty years or more they have been seeking merely relief from chronic prostatitis. As involved as are the prostates of these individuals—pathologically speaking—with proper urological treatment, over 95 per cent of them can become clinically cured. Yet, to effect a cure may test the skill of the best trained specialists in the genito-urinary field.

Needless to say that the patients with chronic prostatitis must have a complete physical examination. On the one hand, the general examination may reveal foci of infection in other parts of the body that may have to be cleared up before the prostate can be cured. On the other hand, the whole urinary tract should often be studied to determine and attempt to eradicate any pathology in way of obstruction and infection from the kidneys to the meatus before or during the treatment of the prostate, because other parts of the urinary and sexual apparatus are so intimately connected to that gland that, with untreated pathology in the former, it may be impossible to cure the latter. Besides having these focal infections in any part of the body, including the genito-urinary tract, the patient with chronic prostatitis may be run down and generally debilitated from excesses, overwork, lack of rest, worry, and improper diet—any of which conditions will have a tendency to impede the curative treatment of the prostate. It often becomes the duty of the practitioner to give advice that may radically change the patient's mode of living together with prescriptions for tonics, sedatives, and diet lists containing generous amounts of vitamins. Thus, we must often consider the patient's entire physical condition, rather than confine our attention solely to the genital tract, in successfully treating prostate cases.

An outline of chronic prostatitis treatment may be made more comprehensible if we divide the pathologic conditions of this gland into two classes, namely, (1) chronic prostatitis without morbid structural changes in the posterior urethra or vesicle neck, (2) those in which there are visible pathologic changes in the way of dilated ducts, sinuses, crypts and contractures of the neck, or stones.

The one prerequisite factor to effect a cure in chronic prostatitis is to establish efficient drainage. The only method of establishing drainage is by way of the forty-odd ducts leading from the prostate into the prostatic urethra; the obstruction in the minute ramifications of these ducts must be opened up, and the universal practice of accomplishing this is by means of prostatic massage. The force, intensity, and duration of each prostatic massage is determined entirely by the pathologic condition of each individual prostate. The general rule to follow is that better results are obtained by massaging gently for a period four times as long rather than to massage forcibly for ten to thirty seconds. There is a reflex sympathetic nerve response in those who have never had a prostatic massage, so that, if one gives the first massage very forcibly, it may place the patient in deep surgical shock, and even deaths have been reported from such indiscreet procedure. Also such harsh preliminary treatment may induce the rapid formation of prostatic abscesses and epididymitis that are very painful and incapacitating. Therefore, the rule is, "Go slowly, and feel your way." Following massage, through and through irrigation is in order. Such solutions as potassium permanganate 1-4000, warmed to about 100 degrees Fahrenheit, or weak mercurials such as metaphen methiolate or mercurochrome and acriflavine in 1-1000, are very efficient. If there is a concomitant irritating cystitis, especially in elderly feeble men, a boric acid 2 to 4 per cent solution, with distilled water, is the most soothing irrigation to use following massage. Because, at least, a mild chronic cystitis and posterior urethritis often exist in these prostate cases, most urologists usually inject into the emptied bladder, following irrigation, a mild silver salt such as

5 per cent silvol. However, with a more intense involvement of the prostatic urethra, such as a verumontanitis, stronger antiseptics should be applied topically, with a Keys syringe or soft rubber catheter. Four cubic centimeters of 1 per cent acriflavine can be locally applied. Also astringents are often required, of which silver nitrate from one-half to 4 per cent is very extensively used. Antiseptic astringent that is very efficient is made of the following formula:

Zinc sulphatis	0.25
Liq. plumbi subacetatis dil.	100.00

With verumontanitis associated with chronic prostatitis, gratifying results, following massage, are often obtained with a dehydrating agent such as 5 per cent sulphonated bitumen in glycerin; inject the posterior urethra with a Gunyon or ordinary soft rubber catheter. When using these stronger injections, it is far more comforting to the patient, for the first few treatments, to precede such injections with topical application of a few cubic centimeters of 2 per cent novocain.

It is generally agreed by many leading authorities that when stripping of the prostate continues to yield pus, heat applied to the pelvis and more particularly to the prostate through the rectum is indicated, thereby increasing the circulation and aiding the tissues to put up a fight against the infection. It is puzzling doctors today to know whether to use diathermy, short-wave, or ultra-short-wave heat in these cases. It is generally recognized now that both diathermy and short-wave have their respective fields of usefulness and, contrary to what was predicted more than a year ago, we cannot replace diathermy with short-wave. Undoubtedly, diathermy is by far the best modality for continued treatment of the prostate through the rectal walls. For more diffuse heat through the pelvis, bipolar short-wave can be used or monopolar ultra-short-wave magnetic coil can be placed above the lower abdomen and apply heat with the inductotherm. Heat applied by any of these methods should be given for periods of thirty to forty-five minutes from two to three times a week.

While chronic prostatitis disturbance—which is understood as prostatism—seems to occur more in persons who do not present a history of gonorrhea, it is to be kept in mind that prostatitis is a frequent complication of acute gonorrhea, it being held probably true by many leading authorities that there are few cases of male gonorrhea in which the prostate is not involved to a more or less serious degree. When the gonorrheal infection has become established in the prostate, it is soon complicated by secondary bacteria, usually the staphylococcus, but less often by the colon bacillus, streptococcus, enterococcus, and pseudo-diphtheroid bacillus. The infectious factor justifies deliberate attempt at immunication, in which vaccines—especially autogenous vaccines—come into consideration. Then, also, nonspecific protein therapy with milk, typhoid vaccine, proteolac, omnadin, activin, edwenil, and similar preparations, may be used to stimulate leukocytic activity, and thereby build up increased bodily resistance to various types of prostatic infection. There is also chemotherapy, as suggested by a host of authors which, like vaccinotherapy, and foreign proteid therapy, aims to overcome the infection through utilizing powers of the patient himself by increasing his resistance. The stimulation of the antibacterial powers include an increase in the ability of the phagocytes to remove the products of infection, and, of course, the white blood cells are a means to that end. Hence, any leukocytic stimulant may prove of value.

Two classes of patients with chronic prostatitis that are the "bugbear" of physicians are the sexual neurasthenics that have been rendered neurotic by years of prostatic massage without obtaining relief, and the so-called "gleet" cases in which there is a more or less continuous discharge from the urethra. These sorts of cases that have had all kinds of routine treatment mentioned above, without receiving permanent benefit, may complain of definite perineal pain, aching, throbbing, or perirectal discomfort. Some have dysuria of varying degrees; some have definite histories of recurring acute prostatic abscess; most of them have chronic urethral discharge, many of them, especially of the neurasthenic type, have metastatic symptoms such as lumbar pain, sciatic neuritis, and pain in the sacro-iliac or other joints, sometimes with acute synovitis. The chronicity of these cases may be realized when it has been reported by several authors that the average duration of symptoms extend over a period of seven years, and the trouble may have existed as long as thirty years.

Endoscopic, or better, cystoscopic studies should be made, at least of all chronic prostatic cases of long standing. With such thorough examination it will be found that these more chronic types exhibit a more extensive pathology with such condition as median bar at the internal sphincter, which is generally believed to be irritated and stimulated to hypertrophy by chronic infection at the vesicle neck. Also, there may be minute subacute abscesses of the prostate and there may even be diverticula of the prostatic ducts with very small openings from these diverticula leading from the prostate to the urethra. Urethrograms have demonstrated relatively large pockets draining into the urethra through narrow ducts. Then such dilated ducts filled with prostatic calculi may be numerous. These classes of cases come under the second group mentioned in the first part of this paper, and to obtain permanent relief must be submitted to minor surgical procedures. Fulguration and electric coagulation will correct local urethral pathology. The deeper pathologic processes should be subjected to electrocautery, with free openings of the abscesses and ducts, removing of the calculi, and even removal of median bar and considerable prostatic tissue to establish free drainage of prostatic ducts on the one hand, and the free drainage of the bladder on the other. Such surgery will clear up and cure, along with routine treatment, over 95 per cent of all intractable, old chronically infected prostates.